

In the Claims:

1. (cancelled)

2. (currently amended) A The cathode ray tube according to Claim 1, having a cathode for emitting electrons that form an electron beam therein, said cathode comprising:

a basis metal formed of a metal alloy, said alloy including mainly nickel and a weight concentration C_{Mg} of magnesium (Mg) which is between 0.01% and 0.1%, wherein said alloy also includes aluminum, the weight concentration C_{Al} of which satisfies the relationship:

$$C_{Al} \leq 0.14 \times (0.1 - C_{Mg}).$$

3. (currently amended) The A cathode ray tube according to Claim 1, having a cathode for emitting electrons that form an electron beam therein, said cathode comprising:

a basis metal formed of a metal alloy, said alloy including mainly nickel and a weight concentration C_{Mg} of magnesium (Mg) which is between 0.01% and 0.1%, wherein said alloy also contains a weight concentration C_{Al} of aluminum such that, after the cathode has been activated, the percentage of the surface of the alloy below an emissive layer of the cathode covered by stable crystallites is less than or equal to 3%.

4. (currently amended) The cathode ray tube according to Claim 4~~2~~, wherein said basis metal includes an emissive part consisting of a layer of alkaline-earth oxides.

5. (cancelled)

6. (new) The cathode ray tube according to Claim 3, wherein said basis metal includes an emissive part consisting of a layer of alkaline-earth oxides.